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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS POWERS

Appeal 2008-4531
Application 10/677,582
Technology Center 1700

Decided: November 21, 2008

Before TERRY J. OWENS, PETER F. KRATZ, and
KAREN M. HASTINGS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

The Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-8. Claims 11-22, which are all of the other pending claims, stand withdrawn from consideration by the Examiner. We have jurisdiction under 35 U.S.C. § 6(b).

The Invention

The Appellant claims an oxygen absorbing composition which, the Appellant indicates, is useful for limiting oxygen exposure to packaged

goods such as food, pharmaceuticals and paint (Spec. 2:3-8). Claim 1 is illustrative:

1. An oxygen absorbing composition comprising:

10-20 wt% water;

a solution comprising:

the water;

a humectant salt; and

an electrolyte salt;

the solution characterized by a water activity below 0.6;

a water binding carrier mixed with said humectant salt and electrolyte salt solution; and at least one oxygen reducing agent blended with said mixture.^{1,2}

The References

McKedy (McKedy '375)	5,262,375	Nov. 16, 1993
McKedy (McKedy '690)	6,248,690 B1	Jun. 19, 2001
Waterman	2003/0042166 A1	Mar. 6, 2003
Saari	6,921,026 B2	Jul. 26, 2005
		(filed Feb. 5, 2002)

The Rejections

Claims 1-8 stand rejected under: 1) 35 U.S.C. § 102(e) over Saari, 2) 35 U.S.C. § 103(a) over Saari, 3) 35 U.S.C. § 102(b) over McKedy '375,

¹ The Appellant states that the humectant salt “may be the same as the electrolyte salt” (Spec. 3:9-10).

² The Appellant states: “Water activity A_w (or equilibrium relative humidity (ERH)) measures the vapor pressure generated by the moisture present in a hygroscopic product ($\%ERH = A_w \times 100$). Water activity reflects the active part of moisture content or the part which, under normal circumstances, can be exchanged between the substance and its environment” (Spec. 6:8-12).

4) 35 U.S.C. § 103 over McKedy ‘375, 5) 35 U.S.C. § 102(b) over McKedy ‘690, 6) 35 U.S.C. § 103 over McKedy ‘690, and 7) 35 U.S.C. § 103 over Waterman.

OPINION

We reverse the rejections under 35 U.S.C. §§ 102(e) and 102(b) and the rejection under 35 U.S.C. § 103(a) over Waterman, and affirm the rejections under 35 U.S.C. § 103(a) over Saari, over McKedy ‘375 and over McKedy ‘690.

The Appellant does not argue the claims separately (Br. 2-13). Therefore, with respect to the affirmed rejections we address only one claim, i.e., claim 1, which is the sole independent claim. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2007). Also, we need to address only the sole independent claim regarding the reversed rejections.

Rejection under 35 U.S.C. § 102(e) over Saari

Issue

Has the Appellant shown reversible error in the Examiner’s determination that Saari anticipates the invention claimed in the Appellant’s claim 1?

Findings of Fact

Saari discloses a food package humidity control device (abstract) comprising a polymeric pouch containing “a saturated aqueous solution of a solute such as an edible salt or a sugar or another soluble compound that inherently creates a desired relative humidity in the air space adjacent to the humidity control device” (col. 3, ll. 27-31, 36). The solution includes an oxygen scavenging material, which preferably is reduced powered iron, and a gel forming thickener such soluble gums, a protein gel or an inorganic

polymer (col. 3, ll. 31-47; col. 6, ll. 27-30; col. 8, ll. 20-21, 45-48). The solute may be salts or a combination of salts used to obtain virtually any relative humidity in the food's environment (col. 3, ll. 13-14; col. 5, ll. 5-6). Two of the exemplified salts are calcium chloride and lithium chloride (two of the Appellant's humectant salts; Spec. 8:11-12) which produce/maintain, respectively, 29% and 11% relative humidity in the food's environment (col. 3, ll. 13-14; col. 4, ll. 66-67). The preferred solute solubility is 25 to 80%, and the maximum solute solubility is 90% (col. 8, ll. 1-6).

Analysis

The Examiner has the initial burden of establishing a prima facie case of anticipation by pointing out where all of the claim limitations appear, either expressly or inherently, in a single reference. *See In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990).

The Appellant argues that Saari does not disclose a composition having 10-29% water and a water activity below 0.6 in combination with the other components required by claim 1 (Br. 3).

When Saari's solute solubility is in the maximum 80-90% range (col. 8, ll. 1-6), the solution contains 10-20% water as required by the Appellant's claim 1. Saari's calcium chloride and lithium chloride, each of which can correspond to the Appellant's humectant salt and electrolyte salt, produce/maintain, respectively, 29% and 11% relative humidity in the food's environment, which is within the water activity range of below 0.6 required by the Appellant's claim 1. Saari's thickening agent (col. 3, ll. 32-34, 43-46) corresponds to the Appellant's water binding carrier mixed with the salt solution, and Saari's reduced powered iron oxygen scavenger (col. 8, ll. 45-48) is the Appellant's preferred oxygen reducing agent (Spec. 8:7-8).

For the Appellant's claimed invention to be anticipated, the reference must lead one of ordinary skill in the art to a composition which falls within the scope of the claim "without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference." *In re Arkley*, 455 F.2d 586, 587 (CCPA 1972). The Examiner points out what Saari discloses (Ans. 3-4), but does not point out where Saari discloses a composition that meets all of the above claim requirements. Thus, the record indicates that the Examiner relied upon the prohibited picking and choosing to show anticipation.

Conclusion of Law

The Appellant has shown reversible error in the Examiner's determination that Saari anticipates the invention claimed in the Appellant's claim 1.

Issue

Has the Appellant shown reversible error in the Examiner's determination that Saari would have rendered the invention claimed in the Appellant's claim 1 prima facie obvious to one of ordinary skill in the art?

Analysis

The Appellant argues that Saari does not disclose a composition having a water activity below 0.7 (Br. 4; Reply Br. 2).

The Appellant states that the water activity is the equilibrium relative humidity (Spec. 6:8-10). The 29% and 11% humidity level in the food's environment produced and maintained by, respectively, Saari's calcium chloride and lithium chloride (col. 4, l. 66 – col. 5, l. 2), is the equilibrium relative humidity and, therefore, corresponds to the Appellant's water activity.

The Appellant argues that Saari's salts do not meet the requirements of the Appellant's humectant salt and electrolytic salt (Br. 4).

Saari's calcium chloride and lithium chloride (col. 4, ll. 66-67; col. 5, l. 2) are among the Appellant's humectant salts (Spec. 11-13), and the Appellant states that the humectant salt and the electrolyte salt can be the same salt (Spec. 3:9-10).³ Hence, Saari's calcium chloride and lithium chloride meet the requirements of the Appellant's humectant salt and electrolyte salt.

Conclusion of Law

The Appellant has not shown reversible error in the Examiner's determination that Saari would have rendered the invention claimed in the Appellant's claim 1 prima facie obvious to one of ordinary skill in the art.

Issue

Has the Appellant shown reversible error in the Examiner's determination that McKedy '375 and McKedy '690 anticipate the invention claimed in the Appellant's claim 1?

Findings of Fact

McKedy '375 discloses an oxygen absorbing composition for refrigerated food (col. 1, ll. 6-20). The composition includes particulate annealed electrolytically reduced iron (col. 2, ll. 59-60) (electrolytic iron powder is one of the Appellant's oxygen reducing agents (Spec. 8:5-8)), a salt which can be calcium chloride (col. 3, ll. 27-29) (one of the Appellant's humectant salts (Spec. 8:11-12)), and a water attracting and supplying component which can be silica gel (col. 3, ll. 40-45) (one of the Appellant's water binding carriers (Spec. 8:9-10)). McKedy teaches that "[t]he salt can

³ The Appellant lists only humectant salts, not electrolyte salts (Spec. 8).

be added to the silica gel by dissolving it in water before being added to the silica gel” (col. 3, ll. 53-55). The Examiner finds that the water contents of two compositions in McKedy ‘375’s Example 3 are, respectively, about 14.0 and 15.8 wt% (Ans. 6), and the Appellant does not dispute that finding. Because the Examiner’s finding is reasonable and the Appellant has not challenged it, we accept it as fact. *See In re Kunzmann*, 326 F.2d 424, 425 n.3 (CCPA 1964).

McKedy ‘690, which is a continuation-in-part of McKedy ‘375, includes each of the McKedy ‘375 disclosures pointed out above (McKedy ‘690 col. 3, ll. 41-42; col. 4, ll. 8-10, 24-28, 35-37; Example 3).

Analysis

The Appellant argues that McKedy ‘375 and McKedy ‘690 do not disclose a composition having 10-29% water and a water activity below 0.6 in combination with the other components required by claim 1 (Br. 7).

The Examiner points out what McKedy ‘375 and McKedy ‘690 disclose (Ans. 5-7), but does not point out where those references disclose a composition having each of the components required by claim 1. Hence, the Examiner has not established a prima facie case of anticipation of the Appellant’s claimed invention by McKedy ‘375 or McKedy ‘690.

Conclusion of Law

The Appellant has shown reversible error in the Examiner’s determination that McKedy ‘375 and McKedy ‘690 anticipate the invention claimed in the Appellant’s claim 1.

Issue

Has the Appellant shown reversible error in the Examiner’s determination that McKedy ‘375 and McKedy ‘690 would have rendered the

invention claimed in the Appellant's claim 1 prima facie obvious to one of ordinary skill in the art?

Analysis

The Appellant argues that the McKedy patents use silica gel, not salt, as the humectant (Br. 8).

The McKedy calcium chloride (McKedy '375, col. 3, ll. 27-29; McKedy '690, col. 4, ll. 8-10) is one of the Appellant's humectant salts (Spec. 8:11-12). That is so regardless of whether the McKedy silica gel functions as a humectant. *See In re Papesch*, 315 F.2d 381, 391 (CCPA 1963) ("From the standpoint of patent law, a compound and all of its properties are inseparable; they are one and the same thing.")

The Appellant argues that the McKedy patents would not have suggested a water activity of 0.6 because their compositions are for high humidity environments (Br. 8-9).

McKedy '375 (col. 3, ll. 36-50) and McKedy '690 (col. 4, ll. 16-32) disclose that the humidity can be so low that there is insufficient water to combine with the salt to form an electrolyte, in which case water must be supplied by a water supplying component such as silica gel. Hence, the references would have led one of ordinary skill in the art, through no more than ordinary creativity, to provide the McKedy compositions for use in a low humidity (low water activity) environment. *See KSR Int'l. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (In making the obviousness determination one "can take account of the inferences and creative steps that a person of ordinary skill in the art would employ").

The Appellant argues that the McKedy equivalents to the Appellant's water binding carrier bind only water, not water and salt (Reply Br. 2-3).

The disclosures in McKedy '375 (col. 3, ll. 53-55) and McKedy '690 (col. 4, ll. 35-37) that "[t]he salt can be added to the silica gel by dissolving it in water before being added to the silica gel" indicate that the silica gel, which corresponds to the Appellant's water binding carrier, binds both the salt and the water in the solution added to it.

Conclusion of Law

The Appellant has not shown reversible error in the Examiner's determination that McKedy '375 and McKedy '690 would have rendered the invention claimed in the Appellant's claim 1 prima facie obvious to one of ordinary skill in the art.

Issue

Has the Appellant shown reversible error in the Examiner's determination that Waterman would have rendered the invention claimed in the Appellant's claim 1 prima facie obvious to one of ordinary skill in the art?

Findings of Fact

Waterman discloses a pharmaceutical kit comprising a sealed oxygen permeable container containing an oxygen sensitive drug in a solid unit dosage form and at least one oxygen absorber (§ 0010). The oxygen absorber can be electrolytically reduced iron (§ 21) (one of the Appellant's oxygen reducing agents (Spec. 8:5-8)) which, Waterman discloses, is water initiated (§ 0021). The oxygen absorber may be combined with a moisture holding material which can be silicas (§ 21) (one of the Appellant's water binding carriers (Spec. 8:9-10)), and an accelerator which may be metallic iodide or bromide (§ 21) (iodides are among the Appellant's humectant salts

(Spec. 8:11-13)).⁴

Analysis

The Appellant argues that Waterman does not disclose a composition that comprises 10-20 wt% water and is made using a solution containing a humectant salt and an electrolyte salt and having a water activity below 0.6 (Br. 10).

Regarding the required water content, the Examiner argues that Waterman provides a strong suggestion to include a water absorbing/releasing carrier in the composition (Ans. 9), but the Examiner does not provide support for that argument. The Examiner argues that the water activity of 0.6 required by the Appellant's claim 1 is inherently met by Waterman's composition (Ans. 9-10), but again the Examiner provides no support for the argument. The Examiner's mere speculation is not sufficient for establishing a prima facie case of obviousness. *See In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968); *In re Sporck*, 301 F.2d 686, 690 (CCPA 1962).

Conclusion of Law

The Appellant has shown reversible error in the Examiner's determination that Waterman would have rendered the invention claimed in the Appellant's claim 1 prima facie obvious to one of ordinary skill in the art.

DECISION/ORDER

The rejections of claims 1-8 under 35 U.S.C. § 102(e) over Saari, under 35 U.S.C. § 102(b) over McKedy '375, under 35 U.S.C. § 102(b) over

⁴ The Examiner notes (Ans. 9) that Waterman's metallic iodide and bromide are disclosed in U.S. 6,133,361 to Hatakeyama et al., incorporated by reference in Waterman (¶ 21).

McKedy '690, and under 35 U.S.C. § 103 over Waterman are reversed. The rejections of claims 1-8 under 35 U.S.C. § 103(a) over Saari, over McKedy '375, and over McKedy '690 are affirmed.

It is ordered that the Examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

PL INITIAL:

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